

Appendix A: Common Lantana Survey 2003

National Weeds Program Common Lantana (*Lantana camara*) survey

Your response to this survey is important. The information received will be collated to help establish best practice management methods and improve current understanding of the distribution of lantana types across Australia.

All "personal information" will be treated **confidentially**, including off-label use of herbicides.

For their efforts, all respondents will receive a summary copy of the best practice information collated. The survey should take around 20 – 30 minutes to complete. Please attach extra sheets if you wish to expand your answers.

Further information or questions about the timing and use of this survey can be directed to Andrew Clark (National Projects Coordinator Lantana) on 07 3224 8383 or at email: andrew.clark@nrm.qld.gov.au

Office Use Only – ID Code _____

Lantana identified _____

Personal Information

Name _____

Property name _____

Property address _____

_____ State _____ Postcode _____

Phone _____ Mobile _____ Fax _____

Email address _____

Property Information

Property description (Lot on Plan – check your property rates notice) _____

or AMG coordinate of a point on the property _____

or latitude and longitude of a point on the property _____

Shire name or City Council name _____

Are you the owner or property manager?

Question 1 Is lantana found on the property?

Yes. *Please continue.*

No. Thankyou for your time. Please return this form in the self-addressed envelope.

Question 2 What size is the property?

< 100 hectares

101 – 500 hectares

501 – 1000 hectares

1001 – 5000 hectares

5001 – 10 000 hectares

> 10 000 hectares

Question 3 What is the main enterprise or use of the property?

No particular use – vacant land

Reserve – eg road

Conservation – natural bushland

Forestry – commercial – which timber? _____

Agriculture or horticulture – which crops? _____

Pasture for grazing – which stock? what pasture type? _____

Intensive animal production (eg chickens, feed lots) – which? _____

Mixed (grazing and cropping) which mix? _____

Other – please specify _____

Question 4 Describe the type of country this property covers

Topography

- mountainous hilly gradual slopes plain river flat other _____

Geographic location

- coastal hinterland rangeland river valley tableland other _____

Other information? _____

Lantana extent

Please place a **flower sample** of each lantana type found on your property into separate plastic bags and return them with this survey. Flowers are the easiest way to identify various lantana types.

Clearly mark the bag containing the predominant type of lantana on this property.

If you can't retrieve a flower sample please **continue the survey**.

Question 5 Tick one phrase below that best describes the overall extent of lantana growth on this property.

Low density (one or two sporadic plants)

- A small density of lantana in isolated areas
 A small density of lantana scattered over many areas

Medium density (several plants together)

- Medium density of lantana in isolated areas
 Medium density lantana scattered over many areas.

High density (fairly impenetrable thickets)

- High density infestations in limited areas
 High density infestations across extensive areas

Question 6 What has happened with the spread of lantana over the past 2 years on this property?

- Increased spread of lantana – estimate percentage % increase _____
 Little change from original density of lantana + or – 10%
 Decreased spread of lantana – estimate percentage % decrease _____
 Unsure or don't know

Why do you think this is has happened?

Lantana control and management

Question 7 How do you currently control lantana in the following areas

• for each row only tick more than one box if more than one control method is used

• leave rows blank if some of these areas do not exist on this property

	lantana not found here	no control	herbicide ¹	mechanical or hand removal	fire	biological control ²	grazing
water course (eg creek, gully)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
stock feed area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
pasture or crops	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
unused cleared land (vacant)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
natural bushland – scrub	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
fringe areas of forests	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
fences boundaries	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
easements or powerlines	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
sloping hill (accessible)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
steep areas (fairly inaccessible)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

please specify _____

Footnotes: 1. Herbicide usage includes foliar spray, cut stump, cut scrape paint methods amongst others
 2. Biological control is the use of insects and plant diseases to control the growth of a weed.

Question 8 Do you follow up or monitor treated sites?

- Never. No monitoring or follow up treatment of controlled sites.
- Once after treatment (within 6 months)
- Ongoing inspections at regular or irregular intervals (eg annually)

Question 9 How do you prevent lantana regrowth after control measures? *Tick as many boxes as are appropriate.*

- Do nothing
- Revegetate with pasture
- Revegetate with native plants
- Shade out new lantana infestations
- Continual removal by hand or slashing
- Follow up with herbicide
- Prevent animal movement over area to allow pasture to establish.
- Other – please specify _____

Question 10 What limits your adoption of control methods? *Tick as many boxes as are appropriate.*

- Lantana is not considered a problem
- Time
- Cost
- Safety considerations (eg fire control) please specify _____
- Terrain or accessibility
- Knowledge of management options
- Other – please specify _____

Comments? _____

Question 11 Last year what costs were incurred in managing lantana on this property?

- Labour \$ _____
 - Machinery \$ _____
 - Capital costs \$ _____
 - Herbicide \$ _____
 - Contractors \$ _____
 - Other – please specify \$ _____
- TOTAL \$ _____**

Question 12 Please describe current or past control methods that you have tried.

Include:

- types of treatment (eg foliar spray, slasher, cut stump, fire, active spread of biological control agents)
- herbicide used (DP 600), rates used (eg 1 part to 200 parts of water) and
- noticeable long-term effect on lantana (eg success, failure)

Question 13 How does your management of lantana link with other weed management practices?

Extension information

Question 14 How would you prefer advice about lantana to be delivered? *Tick as many boxes as are appropriate.*

- Fact sheet/ brochure
- Field Days or shows – specify any in particular _____
- Website
- Word-of-mouth from neighbour
- Magazine or journal article – specify title _____
- Media (eg newspapers, radio or TV) – specify newspaper or station _____
- Natural Resource Management group (eg Landcare, Bushcare) _____
- Extension officer or Weeds Officer (eg NR&M, EPA, local government) _____
- Agricultural produce merchants (eg Primac Elders, IAMA) _____
- Other – please specify _____

Question 15 Would you consider hosting a field day on this property to demonstrate best practice management and various outcomes?

- Yes
- No
- Unsure

Thankyou for completing this survey.

Please return it with collected flower samples in the pre-addressed envelope provided to:

WONS Lantana Best Practice Technical Officer
Alan Fletcher Research Station
PO Box 36
Sherwood Q 4075

Appendix B: Lantana Aware Survey 2006

Lantana Aware Survey

Please register your interest by filling out the following survey. The information received will be collated to help improve best management practices. **All personal information will be treated confidentially.**

This survey is part of the Lantana Weeds of National Significance (WoNS) project supported by the Australian Government and Queensland Department of Natural Resources, Mines and Water.

Please return forms to:

Andrew Clark

Dept of Natural Resources, Mines and Water, PO Box 1653, Woolloongabba Q 4102.

Flower colour: _____
(describe colour or send a flower sample of each colour variety found on your property)

Property registration details:

Name: _____

Address (postal): _____
_____ Post-code _____

Address (property location): _____

Phone: _____ Email: _____

Local government area (shire) _____

Property description (from rates notice)

Please provide either Lot/Plan for each title, or a GPS point (lat/long) on the property

Title A _____ Title B _____

Title C _____ Title D _____

GPS Latitude _____ Longitude _____

Property impacts and use

1. Is lantana a significant issue on your property?

significant impacts major impacts minor impacts small impacts no impacts

2. How long has lantana been on your property?

_____ years (approximately) Unsure

Do you know how lantana first got to your property or what may have influenced its spread?

3. What is the total area of your property?

_____ hectares

acres

4. How much of the total property area is covered in lantana? (estimate percentage of total property area)

_____ % of total area (eg 30%)

5. Has lantana increased or decreased its spread from the previous year?

increase decrease about the same

6. Identify the main use of your property (Identify primary "1" and secondary "2" uses of your property)

Primary production use – what production? (eg average head of cattle?) _____

Conservation and protection – what do you value here? _____

Recreation use – what purpose? _____

No main use (eg vacant land, scrub) _____

Other? _____

7. If there was no lantana how much **extra** production area would you have?

_____ % of total area (eg 10%)

8. If no lantana was present, indicate how your enterprise would benefit? (please be specific)

(examples: a) increase stock from X head to Y head, b) increase profit from \$X to \$Y, or c) increase land value from \$X to \$Y)

9. How does lantana impact on your property? (Identify the top three ways, by writing "1", "2" and "3" below)

- Death of stock – how many last year? _____
- Increased mustering costs
- Increased weed control costs
- Clogging of fences, tracks, firebreaks
- Invasion of grazing areas (prime land? marginal land? both?)
- Invasion of native vegetation / riparian areas
- Competition for native fauna habitat
- Other _____

Control Efforts

10. How much time (on average) is devoted to controlling lantana on this property?

- 5 days or greater per week (> 20 days per month)
- 3-4 days per week (12-16 days per month)
- 2 days per week (8 days per month)
- 1 day per week (4 days per month)
- ½ day per week (2 days per month)
- < ½ day per week (1 day or less per month)

11. If your current management practices stopped, how quickly would lantana infest the rest of your productive land, conservation areas or recreational areas?

- <2 years
- 2-5 years
- 6-10 years
- 11-20 years
- >20 years

12. Please identify your preference for the following questions

(tick one box per question)

(1 = "definitely yes", 2 = "yes" or "most times" 3 = "sometimes" 4 = "no" or "not always" 5 = "definitely not")

	1	2	3	4	5
Cost savings can be achieved by integrating lantana controls	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Property value depreciates because of lantana invasion	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Herbicide is the best solution to controlling lantana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Pest planning will assist my efforts to control weeds	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Follow up is essential to ensure initial control efforts are not lost	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
A positive return on investment can be achieved for controlling lantana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Using more than one method of controlling lantana works better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Ornamental lantana should be removed from public plantings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I find it difficult to access information about the control of lantana	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bio-control is the only solution to control lantana on my property	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Information about best management practices is useful to improve practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If better outcomes can be achieved, I am willing to change my practices	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. What herbicides do you mostly use? Pick the top three (3). (write "1" first, "2" second, "3" third most)

- Round up (glyphosate)
- Grazon
- Grazon/2-4D mix
- DP 600 (Lantana 600)
- Brushoff/Round Up (or Cut out)
- Starane
- Access
- 2,4-D amine
- Other _____
- None

14. Please describe some of your normal control efforts over the last 12 months.

Site name (1)			
Land use of site (see below a-e)		Size of site (ha)	
Time of year done (month or season)		Density of lantana (heavy, medium, light)	
Methods, equipment and/or rates used			
Follow up / revegetation			
Identify how successful you were (using 1-5 where 1 is "very successful" and 5 is "definitely not successful"). Do you think your effort was cost-effective ?			

Land use = (a) Open grazing paddocks (b) Wooded areas (with or without pasture) (c) Waterways/ gullies (d) natural vegetation
(e) Other? _____

Site name (2)			
Land use of site (see below a-e)		Size of site (ha)	
Time of year done (month or season)		Density of lantana (heavy, medium, light)	
Methods, equipment and/or rates used			
Follow up / revegetation			
Identify how successful you were (using 1-5 where 1 is "very successful" and 5 is "definitely not successful"). Do you think your effort was cost-effective ?			

Land use = (a) Open grazing paddocks (b) Wooded areas (with or without pasture) (c) Waterways/ gullies (d) natural vegetation
(e) Other? _____

Photocopy and attach further site tables as necessary.

15. Detail the lantana control costs incurred over the last 12 months.

(Please provide information about items if relevant)

- \$ _____ Labour (self/family/farm-hands – Calculate hours x \$25/hr)
- \$ _____ Contractor costs (as per invoice)
- \$ _____ Consumable items (small items such hand-sprayers, dye, gloves etc)
- \$ _____ Herbicide costs (including surfactants and other additives)
- \$ _____ Machinery running costs (fuel, maintenance)
- \$ _____ Machinery lease/hire costs (as per invoice)
- \$ _____ Spray equipment costs purchase or hire/lease
- \$ _____ Capital (depreciable) items machinery attachments other _____
- \$ _____ Permits (eg for clearing in native vegetation or fire permits)
- \$ _____ Other costs? _____
- \$ _____ TOTAL**

16. Overall are you satisfied with the results of your efforts?

- Yes No Why? What is your preferred method now? _____
- _____
- _____
- _____
- _____
- _____

17. What incentives would encourage you to commit to more or better lantana control?

(Tick more than one)

- Financial packages or herbicide assistance
- Fuel assistance or tax rebates
- Decreased property value (either increase or decrease)
- Better available information and practices
- New biological control agents (working in conjunction with their impacts)
- Other _____

18. What things prevent you from undertaking lantana control?

Write "1", "2", "3" to indicate your top three (3) issues

- Costs of control
- Available time for weed management over other priorities
- Seasonal timing
- Density or access to infestations is restricted (eg steep areas)
- Permits for clearing or fire are difficult to obtain
- Persistence of lantana
- No incentives available
- None of the above
- Other? _____

Setting goals – Can you set some achievable targets for your property?

19. Set two objectives for the next 12 months?

Examples: a) Target control of lantana in <Site X> of Y hectares, b) develop a property pest management plan, c) consolidate areas cleared, or d) hold a field day and demonstrate your practices

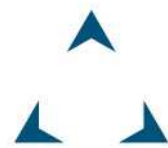
- Objective 1 _____
- _____
- Objective 2 _____
- _____

- Please tick the box to allow us to use information in this survey to assess your progress over time. No personal information will be published to identify individual people or properties. Any information published will only be used for broad analysis, for example, to identify a range of activities being undertaken in an area or average costs or attitudes.

The information I have provided in this survey questionnaire has been done so in good faith, and is accurate to the best of my current knowledge. I am setting the above goals to undertake lantana control over the next 12 months.

20. Signature: _____ **Date:** _____

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AEC*group*

- > BRISBANE
- > SYDNEY
- > CANBERRA
- > TOWNSVILLE
- > CAIRNS

E: aec@aecgrouppltd.com

W: www.aecgrouppltd.com